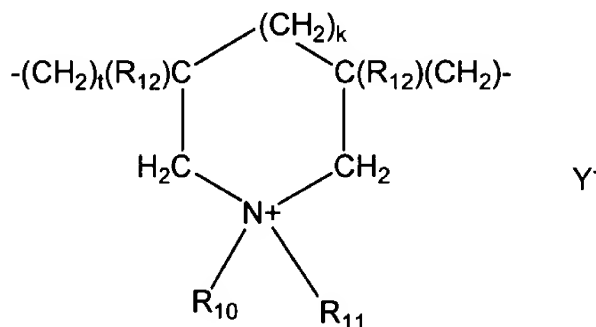


submit a marked-up version of these claims. Deletions appear in ~~striktthrough font~~, and additions are underlined and **bolded**. Please substitute the following amended claims for pending claims 1, 4-12, 20, 22, 26, 38, 55, 58, 61, 64, 74, 77, 80, 83, 86, and 89.

1. (Twice Amended) A composition for oxidation dyeing keratin fibres comprising, in an appropriate dyeing medium, (1) at least one oxidation dye, (2) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):

(I)



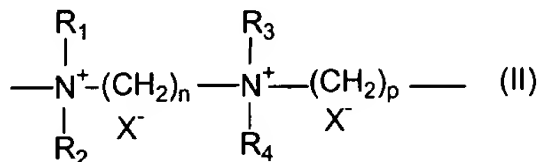
wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;

- Y⁻ is an anion; and

(3) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):



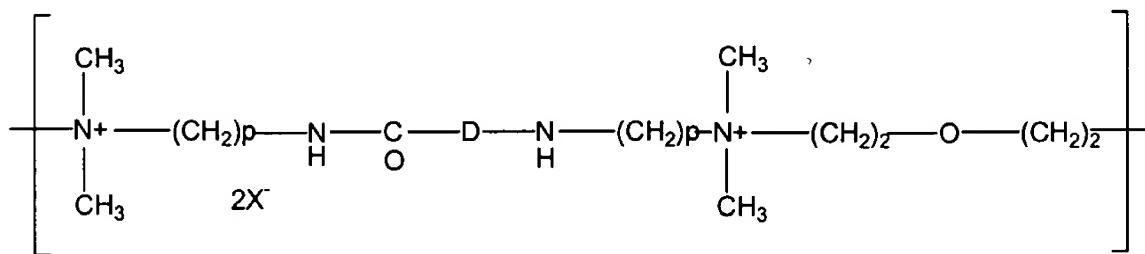
wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;

- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and

- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula (V):



(V)

wherein:

- p is an integer ranging from 1 to 6,

- D is chosen from direct bonds and $-(CH_2)_r-CO-$ groups, wherein r is a number equal to 4 or 7, and

- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

4. (Amended) A composition according to claim 1, wherein in said formula (I) said R_{12} is hydrogen, said R_{10} and R_{11} are methyl groups, and Y^- is chloride.

5. (Amended) A composition according to claim 1, wherein in said formula (II) said R_1 , R_2 , R_3 and R_4 , which may be identical or different, are each chosen from methyl and ethyl groups, and X^- is a halogen atom.

6. (Amended) A composition according to claim 5, wherein in said formula (II) said R_1 , R_2 , R_3 and R_4 are methyl groups, $n = 3$, $p = 6$ and X^- is chloride.

7. (Amended) A composition according to claim 5, wherein in said formula (II) said R_1 , and R_2 are methyl groups, R_3 and R_4 are ethyl groups, $n = p = 3$ and X^- is bromide.

8. (Amended) A composition according to claim 1, wherein said D of said formula (V) is a direct bond and X^- is chloride.

9. (Amended) A composition according to claim 1, wherein said at least one cyclohomopolymer of dialkyldiallylammonium with units of formula (I) is present in an amount ranging from 0.05% to 5% by weight relative to the total weight of the composition.

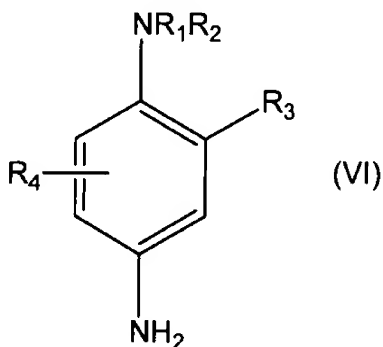
10. (Amended) A composition according to claim 9, wherein said at least one cyclohomopolymer of dialkyldiallylammonium with units of formula (I) is present in an

amount ranging from 0.1% to 3% by weight relative to the total weight of the composition.

11. (Amended) A composition according to claim 4, wherein said at least one cyclohomopolymer of dialkyldiallylammonium with units of formula (I) is present in an amount ranging from 0.05% to 5% by weight relative to the total weight of the composition.

12. (Amended) A composition according to claim 11, wherein said at least one cyclohomopolymer of dialkyldiallylammonium with units of formula (I) is present in an amount ranging from 0.1% to 3% by weight relative to the total weight of the composition.

20. (Amended) A composition according to claim 19, wherein said para-phenylenediamines are chosen from compounds of formula (VI):



wherein:

-R₁ is chosen from hydrogen, C₁-C₄ alkyl groups, monohydroxy(C₁-C₄ alkyl) groups, polyhydroxy(C₂-C₄ alkyl) groups, (C₁-C₄)alkoxy(C₁-C₄)alkyl groups, phenyl groups, 4'-aminophenyl groups, and C₁-C₄ alkyl groups substituted with at least one group chosen from nitrogen-containing groups,

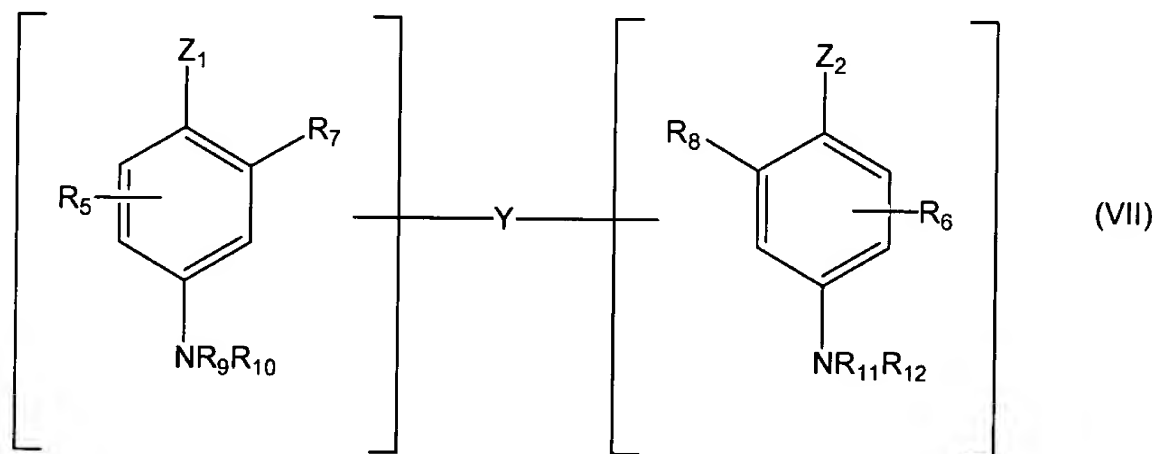
C3
-R₂ is chosen from hydrogen, C₁-C₄ alkyl groups, monohydroxy(C₁-C₄ alkyl) groups, polyhydroxy(C₂-C₄ alkyl) groups, (C₁-C₄)alkoxy(C₁-C₄)alkyl groups, and C₁-C₄ alkyl groups substituted with a nitrogen-containing group;

-R₁ and R₂ may also form, together with the nitrogen atom to which they are bonded, a 5- or 6- membered nitrogen-containing heterocycle ring, optionally substituted with at least one group chosen from alkyl groups, hydroxyl groups and ureido groups;

-R₃ is chosen from hydrogen, halogens, C₁-C₄ alkyl groups, sulfo groups, carboxyl groups, monohydroxy(C₁-C₄ alkyl) groups, hydroxy(C₁-C₄ alkoxy) groups, acetylamino(C₁-C₄ alkoxy) groups, mesylamino(C₁-C₄ alkoxy) groups, and carbamoylamino(C₁-C₄ alkoxy) groups; and

-R₄ is chosen from hydrogen, halogens, and C₁-C₄ alkyl groups.

C4
22. (Amended) A composition according to claim 19, wherein said double bases are chosen from compounds of formula (VII):



wherein:

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C4
-Z₁ and Z₂, which may be identical or different, are each chosen from hydroxyl groups, and -NH₂ groups, optionally substituted with a group chosen from C₁-C₄ alkyl groups, and linkers Y;

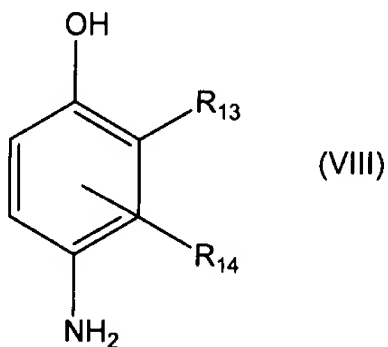
-linker Y is chosen from linear and branched, divalent alkylene groups comprising from 1 to 14 carbon atoms, optionally interrupted by, or optionally terminating with, at least one entity chosen from nitrogen-containing groups and heteroatoms, and optionally substituted with at least one group chosen from hydroxyl groups, and C₁-C₆ alkoxy groups;

- R₅ and R₆, which may be identical or different, are each chosen from hydrogen, halogens, C₁-C₄ alkyl groups, monohydroxy(C₁-C₄ alkyl) groups, polyhydroxy(C₂-C₄ alkyl) groups, amino(C₁-C₄ alkyl) groups, and linkers Y; and

- R₇, R₈, R₉, R₁₀, R₁₁ and R₁₂, which may be identical or different, are each chosen from hydrogen, linkers Y, and C₁-C₄ alkyl groups;

- provided that said compounds of formula (VII) comprise only one linker Y per molecule.

26. (Amended) A composition according to claim 19, wherein said para-aminophenols are chosen from compounds of formula (VIII):



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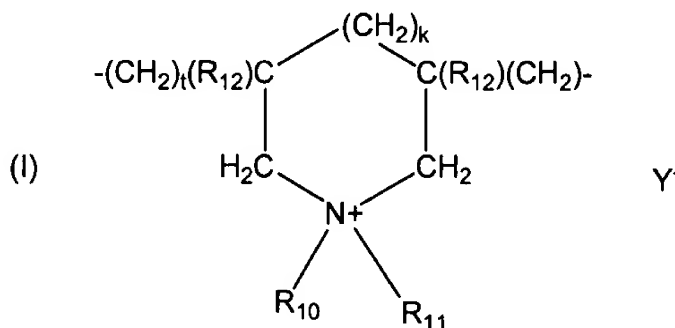
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wherein:

- R₁₃ is chosen from hydrogen, halogens, C₁-C₄ alkyl groups, monohydroxy(C₁-C₄ alkyl) groups, (C₁-C₄)alkoxy(C₁-C₄)alkyl groups, amino(C₁-C₄ alkyl), and hydroxy(C₁-C₄)alkylamino(C₁-C₄ alkyl) groups;
- R₁₄ is chosen from hydrogen, halogens, C₁-C₄ alkyl groups, monohydroxy(C₁-C₄ alkyl) groups, polyhydroxy(C₂-C₄ alkyl) groups, amino(C₁-C₄ alkyl) groups, cyano(C₁-C₄ alkyl) groups, and (C₁-C₄)alkoxy(C₁-C₄)alkyl groups.

38. (Twice Amended) A ready-to-use cosmetic composition for oxidation dyeing keratin fibers, wherein said ready-to-use cosmetic composition is obtained by including at least one dyeing composition (A) in a dyeing medium, comprising:

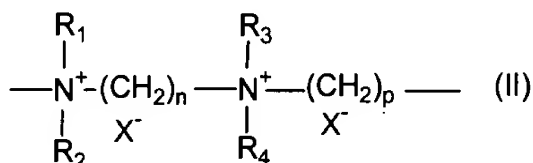
- at least one oxidation dye,
- at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and
- at least one quaternary polyammonium polymer chosen from:

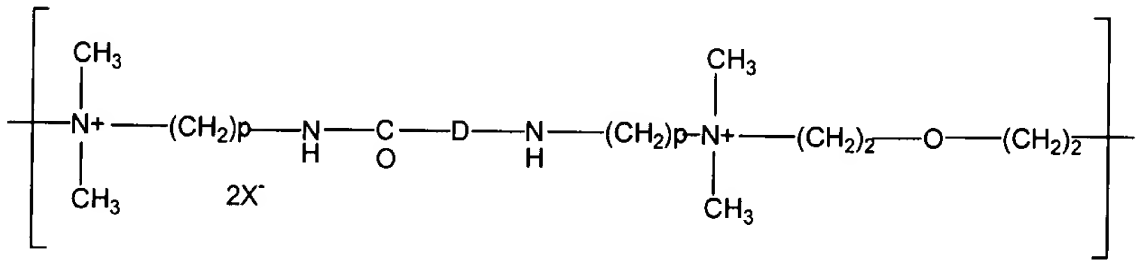
(i) polymers comprising repeating units of formula (II):



wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula (V):



(V)

wherein:

- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $-(\text{CH}_2)_r\text{CO}-$ groups, wherein r is a number equal to 4 or 7, and
- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids, with at least one oxidizing composition (B) comprising at least one oxidizing agent.

C7

55. (Twice Amended) A method for oxidation dyeing keratin fibers comprising:

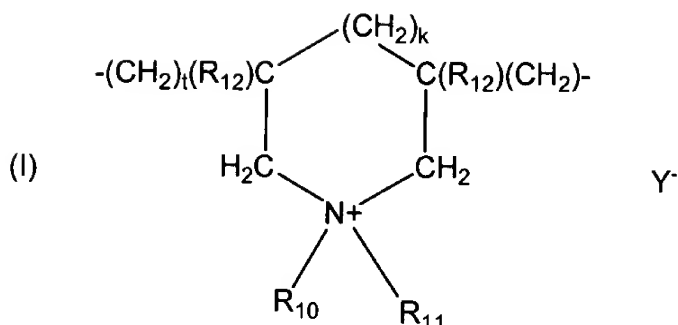
(a) applying to said keratin fibers at least one dyeing composition (A) comprising, in a dyeing medium:

- at least one oxidation dye, and
- a combination comprising:

- (I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):

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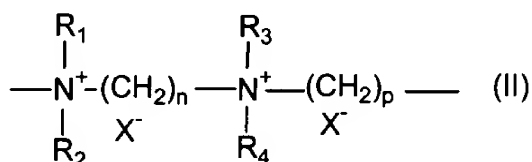
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wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and
- (II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):



wherein:

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- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

$$\left[\begin{array}{c} \text{CH}_3 \\ | \\ \text{N}^+ - (\text{CH}_2)_p - \text{N} - \text{C} - \text{D} - \text{N} - (\text{CH}_2)_p - \text{N}^+ - (\text{CH}_2)_2 - \text{O} - (\text{CH}_2)_2 \\ | \quad \quad \quad | \quad \quad \quad | \\ \text{CH}_3 \quad \quad \quad \text{H} \quad \text{O} \quad \quad \quad \text{H} \\ \quad \quad \quad 2\text{X}^- \end{array} \right]$$

(V)

- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids, and

(b) developing the color with the aid of at least one oxidizing composition (B) comprising at least one oxidizing agent, wherein said at least one oxidizing composition (B) is combined at the time of use with said at least one dyeing composition (A) or said at

least one oxidizing composition (B) is applied sequentially to said at least one dyeing composition (A) without intermediate rinsing.

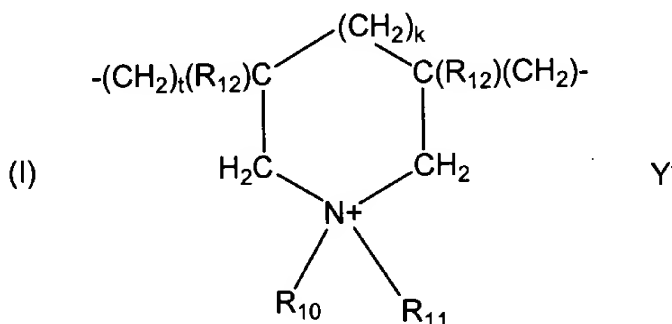
58. (Twice Amended) A method for oxidation dyeing keratin fibers comprising:

(a) applying to said keratin fibers at least one dyeing composition (A) comprising, in a dyeing medium:

- at least one oxidation dye, and

- a combination comprising:

- (I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;

- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;

- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;

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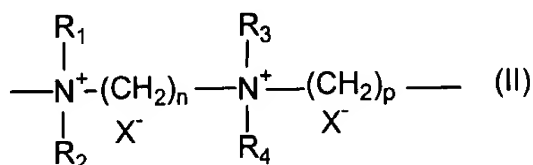
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- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;

- Y⁻ is an anion; and

- (II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):



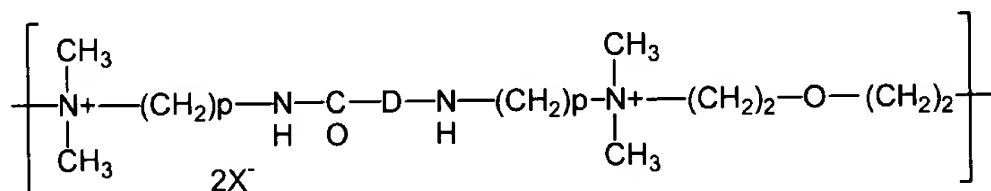
wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;

- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and

- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula (V):



(V)

wherein:

- 8
- p is an integer ranging from 1 to 6,
 - D is chosen from direct bonds and $-(CH_2)_r-CO-$ groups, wherein r is a number equal to 4 or 7, and
 - X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids, and

(b) developing the color with the aid of at least one oxidizing composition (B) comprising:

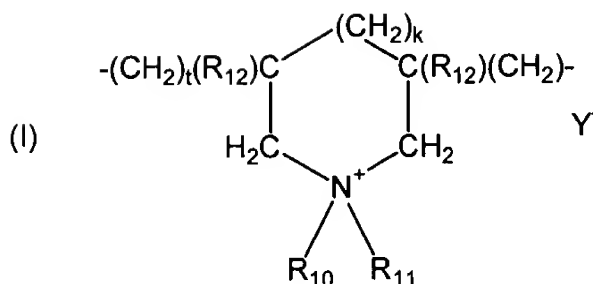
- at least one oxidizing agent, and
- a combination comprising at least one cyclohomopolymer of dialkyldiallylammonium as defined above and at least one other quaternary polyammonium as defined above,
- wherein said at least one oxidizing composition (B) is combined at the time of use with said at least one dyeing composition (A) or said at least one oxidizing composition (B) is applied sequentially to said at least one dyeing composition (A) without intermediate rinsing.

61. (Twice Amended) A method for oxidation dyeing keratin fibers comprising:

- 9
- applying to said keratin fibers at least one dyeing composition (A) comprising, in a dyeing medium, at least one oxidation dye,
 - developing the color with the aid of at least one oxidizing composition (B) comprising at least one oxidizing agent,
 - wherein said oxidizing composition (B) comprises a combination comprising:
 - (I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):

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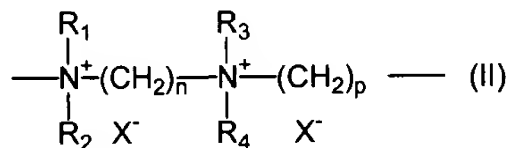


wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and

- (II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):

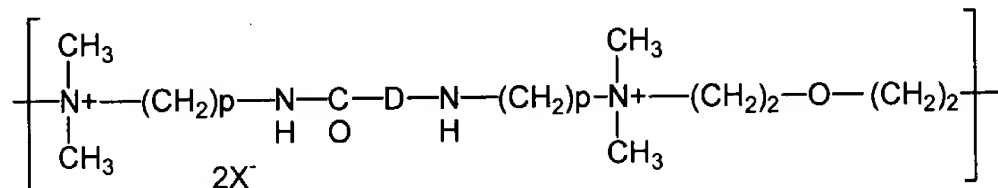


wherein:

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- (ii) polyquaternary ammonium polymers comprising repeating units of formula (V):



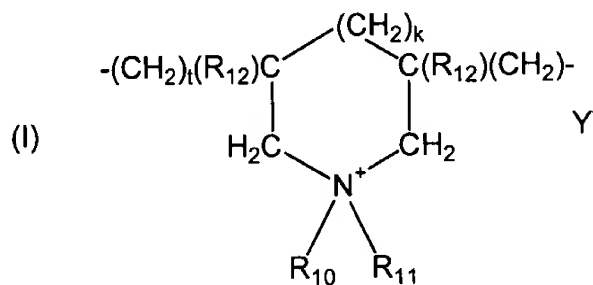
(V)

- wherein said at least one oxidizing composition (B) is combined at the time of use with said at least one dyeing composition (A) or wherein said at least one oxidizing composition (B) is applied sequentially to said at least one dyeing composition (A) without intermediate rinsing.

64. (Twice Amended) A kit for dyeing keratin fibers comprising at least two compartments, wherein:

- a first compartment comprises at least one oxidation dye and a combination comprising:

(I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):

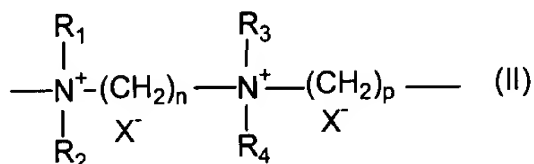


wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and

(II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):

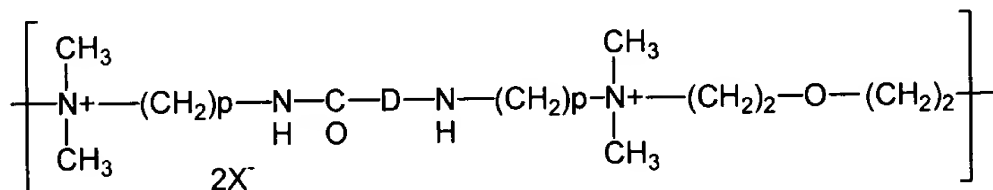


wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula

(V):



(V)

wherein:

- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $\text{---}(\text{CH}_2)_r\text{---CO---}$ groups, wherein r is a number equal to 4 or 7, and

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- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids, and

- a second compartment comprises at least one oxidizing agent.

74. (Twice Amended) A method for oxidation dyeing keratin fibers comprising:

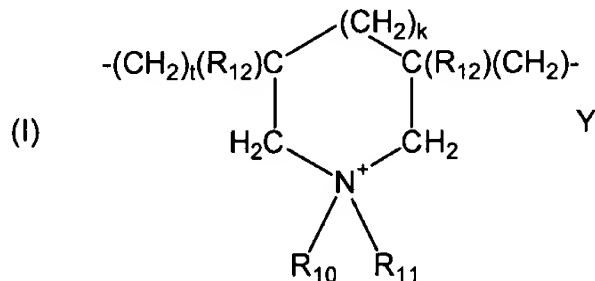
(a) applying to said keratin fibers at least one dyeing composition (A) comprising, in a dyeing medium:

- at least one oxidation dye, and

(b) developing the color with the aid of at least one oxidizing composition (B) comprising at least one oxidizing agent, wherein said at least one oxidizing composition (B) is combined at the time of use with said at least one dyeing composition (A) or said at least one oxidizing composition (B) is applied sequentially to said at least one dyeing composition (A) without intermediate rinsing, wherein:

- (I) said at least one dyeing composition (A) comprises:

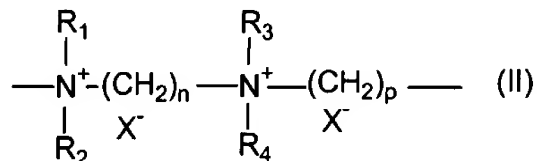
- at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;

- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and wherein:
- (II) said at least one oxidizing composition (B) comprises:
- at least one quaternary polyammonium polymer chosen from:
 - (i) polymers comprising repeating units of formula (II):



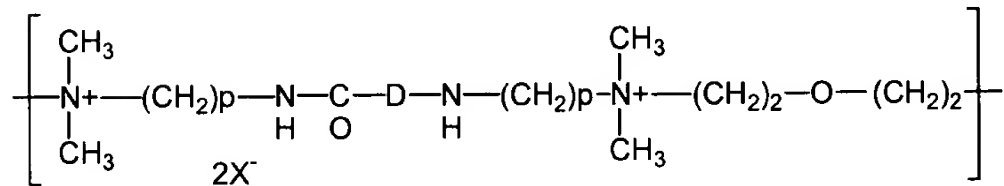
wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

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formula (V):

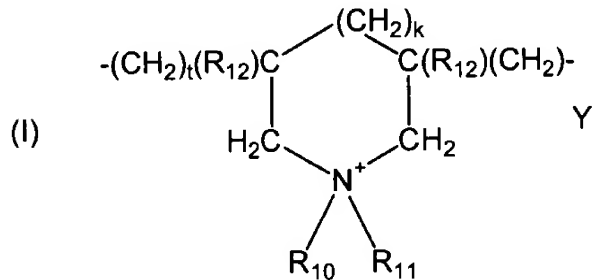


(V)

- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $-(CH_2)_r-CO-$ groups, wherein r is a number equal to 4 or 7, and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

- (I) said at least one oxidizing composition (B) comprises:

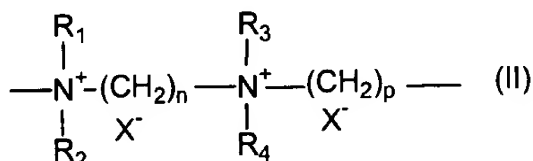
- at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and wherein:
- (II) said at least one dyeing composition (A) comprises:
- at least one quaternary polyammonium polymer chosen from:

- (i) polymers comprising repeating units of formula (II):



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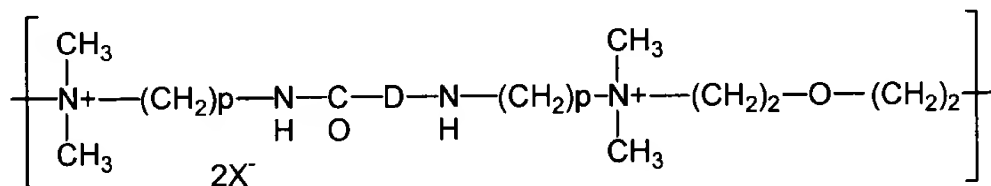
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wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

- (ii) polyquaternary ammonium polymers comprising repeating units of

formula (V):



(V)

wherein:

- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and -(CH₂)_r-CO- groups, wherein r is a number equal to 4 or 7, and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

80. (Twice Amended) A kit for dyeing keratin fibers comprising at least two

compartments, wherein:

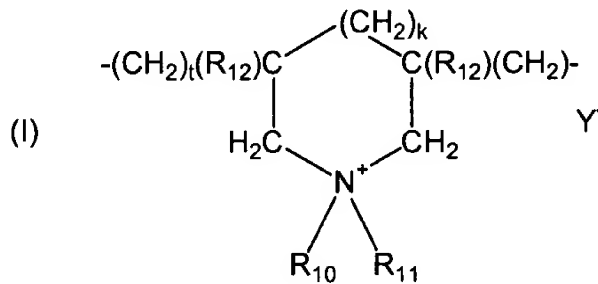
- a first compartment comprises at least one oxidation dye and

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- a second compartment comprises at least one oxidizing agent and a combination comprising:

(I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

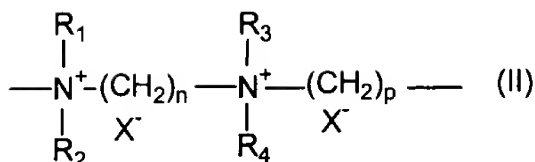
- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;
- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;
- Y⁻ is an anion; and

(II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):

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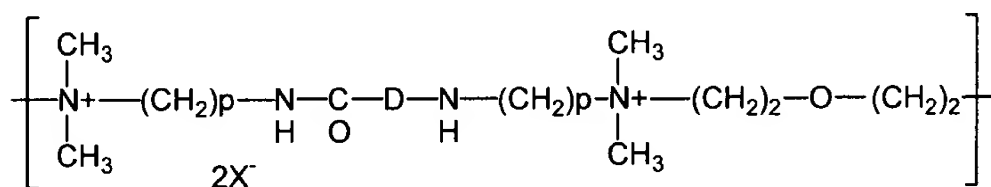


wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula

(V):



(V)

wherein:

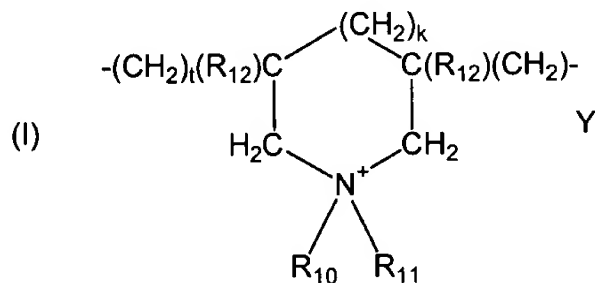
- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $\text{---}(\text{CH}_2)_r\text{CO}\text{---}$ groups, wherein r is a number equal to 4 or 7, and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

83. (Twice Amended) A kit for dyeing keratin fibers comprising at least two

compartments, wherein:

- a first compartment comprises at least one oxidation dye and a combination comprising:

(I) at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;

- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;

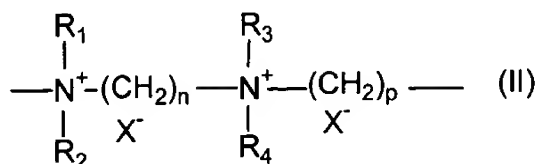
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;

- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;

- Y⁻ is an anion; and

(II) at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):

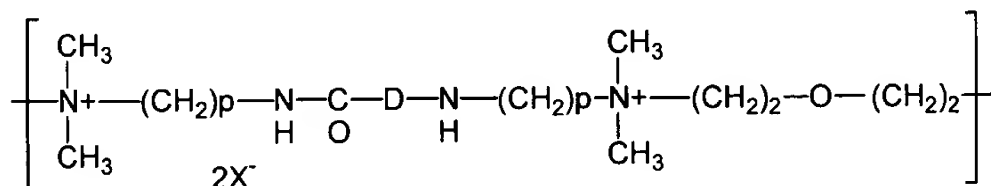


wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula

(V):



(V)

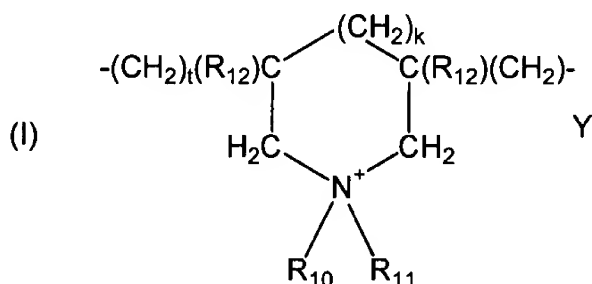
wherein:

- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $\text{---}(\text{CH}_2)_r\text{---CO---}$ groups, wherein r is a number equal to 4 or 7, and

- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids, and
- a second compartment comprises at least one oxidizing agent and a combination comprising at least one cyclohomopolymer of dialkyldiallylammonium as defined above and at least one other quaternary polyammonium polymer as defined above.

86. (Twice Amended) A kit for dyeing keratin fibers comprising at least two compartments, wherein:

- a first compartment comprises at least one oxidation dye and at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



wherein:

- k and t, which may be identical or different, are each chosen from 0 and 1, with the proviso that the sum of k + t is equal to 1;
- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;
- R₁₀ and R₁₁, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 22 carbon atoms, hydroxyalkyl groups, and C₁-C₄ amidoalkyl groups;

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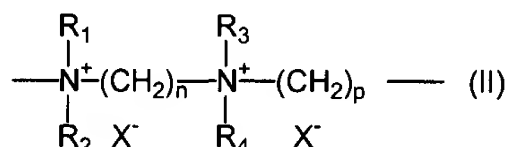
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- R₁₀ and R₁₁, together with the nitrogen atom to which they are commonly bonded, may additionally form at least one heterocyclic group;

- Y⁻ is an anion, and wherein:

- a second compartment comprises at least one oxidizing agent and at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):



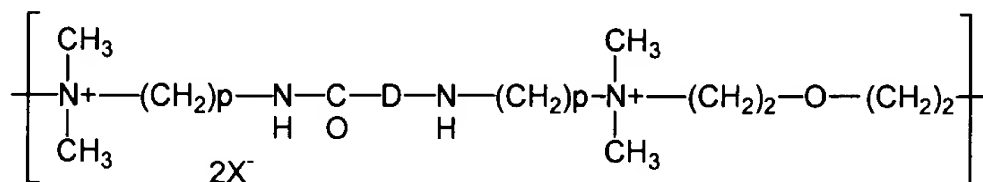
wherein:

- R₁, R₂, R₃ and R₄, which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;

- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and

- X⁻ is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula (V):



(V)

wherein:

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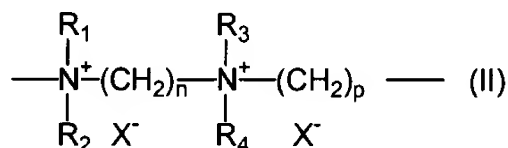
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- p is an integer ranging from 1 to 6,
- D is chosen from direct bonds and $-(CH_2)_r-CO-$ groups, wherein r is a number equal to 4 or 7, and
- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids.

89. (Twice Amended) A kit for dyeing keratin fibers comprising at least two compartments, wherein:

- a first compartment comprises at least one oxidation dye and at least one quaternary polyammonium polymer chosen from:

(i) polymers comprising repeating units of formula (II):



wherein:

- R_1 , R_2 , R_3 and R_4 , which may be identical or different, are each chosen from alkyl groups comprising from 1 to 4 carbon atoms and hydroxyalkyl groups comprising from 1 to 4 carbon atoms;
- n and p, which may be identical or different, are each chosen from integers ranging from 2 to 20; and
- X^- is an anion chosen from anions derived from inorganic acids and anions derived from organic acids; and

(ii) polyquaternary ammonium polymers comprising repeating units of formula

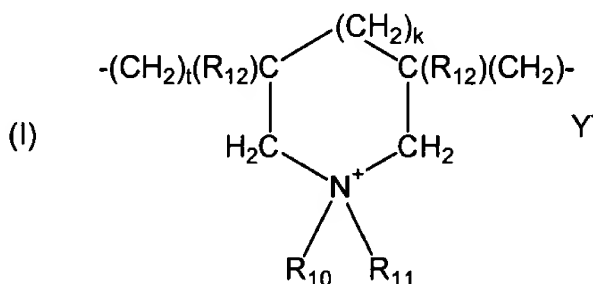
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- a second compartment comprises at least one oxidizing agent and at least one cyclohomopolymer of dialkyldiallylammonium comprising, as a constituent of the chain, at least one unit of structure (I):



- R₁₂, which may be identical or different, are each chosen from hydrogen atoms and methyl groups;